

Title (en)  
IMAGE SENSOR HAVING REDUCED PARASITIC CAPACITANCE

Title (de)  
BILDSSENSOR MIT REDUZIERTER PARASITÄRER KAPAZITÄT

Title (fr)  
CAPTEUR D'IMAGES DOTÉ D'UNE CAPACITÉ PARASITE RÉDUITE

Publication  
**EP 3809693 B1 20231227 (EN)**

Application  
**EP 20196067 A 20200914**

Priority  
KR 20190128980 A 20191017

Abstract (en)  
[origin: EP3809693A1] Described is an image sensor including a pixel array including a plurality of pixels connected to row lines extending in a first direction and column lines extending in a second direction intersecting the first direction; a ramp voltage generator configured to output a ramp voltage; a sampling circuit including a plurality of comparators, each comparator of the plurality of comparators having a first input terminal connected to a column of the column lines and a second input terminal configured to receive the ramp voltage; and an analog-to-digital converter configured to convert an output of the plurality of comparators to a digital signal, wherein the plurality of comparators include a first comparator connected to a first column line, and a second comparator connected to a second column line adjacent to the first column line in the first direction, wherein each of the first comparator and the second comparator includes a first transistor and a second transistor disposed sequentially in the second direction, and wherein a gap between the first transistor of the first comparator and the second transistor of the first comparator is different from a gap between the first transistor of the second comparator and the second transistor of the second comparator.

IPC 8 full level  
**H04N 25/78** (2023.01); **H04N 25/617** (2023.01)

CPC (source: EP KR US)  
**H01L 27/14603** (2013.01 - KR); **H01L 27/14623** (2013.01 - US); **H01L 27/14636** (2013.01 - US); **H04N 25/60** (2023.01 - EP KR); **H04N 25/617** (2023.01 - EP); **H04N 25/75** (2023.01 - EP KR); **H04N 25/772** (2023.01 - EP KR US); **H04N 25/78** (2023.01 - EP)

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**EP 20196067 A 20200914**; KR 20190128980 A 20191017; US 202016890422 A 20200602